

# Compact™ by FORMICA GROUP

## STRUCTURAL LAMINATES

### T E C H N I C A L   D A T A

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#### **PRODUCT DESCRIPTION**

Melamine impregnated decorative surface papers are combined with phenolic treated kraft paper consolidated in a press at high pressure.

#### **RECOMMENDED APPLICATION**

Compact by Formica Group is suitable for interior horizontal or vertical surfaces where high strength, impact, water, and humidity resistance are required. Because of its inherent high strength, Compact sheets may be used as a structural material. Compact sheets can be drilled, routed, tapped, sanded, shaped and cut with standard carbide-tipped tooling. Compact sheet is available in two-sided decorative face; thicknesses ranging from 1/8" (3.18mm) to 1" (25.4mm) with black core. Fire retardant, Class I (A) grades are also available.

#### **FABRICATION AND ASSEMBLY**

##### **Limitations**

Compact sheet is suitable for interior horizontal or vertical surfaces. Compact sheets, 1/4" (6.4mm) or less, is not recommended for adherence directly to plaster, gypsum board, or concrete. Do not use in areas exposed to temperature exceeding 275 degrees F (135 degrees C). Compact sheet is not recommended for exterior applications.

##### **Storage**

Compact sheet should be stored horizontally, with a caul board or other protective sheet placed on top to protect the material from possible damage. The material should be protected from moisture, and should never be stored in contact with the floor or an outside wall. Optimum conditions for storage are approximately 75 degrees F (24 degrees C), and 45% to 55% relative humidity.

##### **Preconditioning**

Compact sheet moves with changes in humidity, but less than standard high pressure laminate (HPL) sheet. Allow Compact sheets to acclimate for at least 48 hours to ambient conditions prior to fabrication. Optimum conditions are approximately 75 degrees F (24 degrees C), and at a relative humidity of 45% to 55%. Provisions should be made for the circulation of air around the material.

##### **Substrates**

If required, thinner variations of Compact sheet may be bonded to 45# density, industrial grade particle board (ANSI A208.1-1999), medium density fiberboard (MDF), or hardwood-faced luan plywood. Softwood fir and other plywood have different dimensional stability and are not recommended as substrates. The substrates should be sanded smooth, clean, free of oil or grease, and uniform in thickness.

##### **Adhesives**

PVAc and rigid-set adhesives (urea, resorcinol) can be used to bond Compact sheets to substrates. Solvent-based contact adhesive can be used to bond laminate sheets to Compact sheets. Do not use water-based contacts for this application. Compact sheets greater than 1/4" (6.4mm) in thickness, can be applied as wall panels to the substrate using mechanical fasteners.

##### **Assembly**

Material, equipment, and workmanship should conform to the industry standard practices, conditions, procedures, and recommendations as specified by ANSI/NEMA LD3-2005. Compact sheets can be sawed, drilled, routed, and fabricated similarly to standard HPL. Carbide-tipped cutting tools are recommended. All inside corners of cutouts must be radiused as large as possible, 1/8" (3.18mm) minimum, to avoid stress cracking. The edges and corners should be routed, sanded, or filed smooth and free of chips or nicks.

## Performance compliance of Compact by Formica Group

### ANSI/NEMA Standards Publication - LD3-2005

Physical Properties	LD3 Test	Compact
Appearance	3.1	No ABC Defects
Light Resistance	3.3	Slight Effect
Cleanability	3.4	20 (maximum)
Stain Resistance	3.4	No Effect Moderate Effect
Reagents 1 - 10		No Effect
Reagents 11 - 15		Moderate Effect
Boiling Water Resistance	3.5	Slight Effect
High Temperature Resistance	3.6	Slight Effect
Ball Impact Resistance (in.)	3.8	75 (minimum)
- in		1905 (minimum)
- mm		1905 (minimum)
Radiant Heat Resistance (sec.)	3.10	250 (minimum)
Dimensional Change	3.11	
Machine Direction - %		0.20 (maximum)
Cross Direction - %		0.50 (maximum)
Wear Resistance - cycles	3.13	400 (minimum)

### ASTM Mechanical Performance Properties

Mechanical Properties*	ASTM Test	Compact
Flexural Strength	D790-84a	
Ultimate		1.877 x 10 <sup>4</sup> psi
Modulus		1.690 x 10 <sup>4</sup> psi
Tensile Strength	D638-84	
Ultimate		1.637 x 10 <sup>4</sup> psi
Modulus		1.650 x 10 <sup>4</sup> psi
Bond Strength	D952-8	1.460 x 10 <sup>4</sup> psi
Bearing Strength	D953-84a	1.650 x 10 <sup>4</sup> psi
Barcol Hardness	D2583	70

\*Typical test results from an independent outside laboratory

### FIRE TEST DATA - ASTM E-84

Contact Formica Corporation - Technical Services.

#### Sizes

Standard Compact

Sheet Sizes: 48" (121.9cm) x 96" (243.8cm),  
60" (152.4cm) x 96" (243.8cm)  
60" (152.4cm) x 120" (403.8cm),  
60" (152.4cm) x 144" (365.8cm)

Fire-Rated Compact

Sheet Widths: 48" (121.9cm), 60" (152.4cm)  
Sheet Lengths: 96" (243.8cm), 120" (403.8 cm),  
144" (365.8cm)

#### Nominal Thicknesses

Compact sheet thickness tolerance is approximately  $\pm 5\%$  of the nominal thickness'

0.125"  $\pm 0.007$ " (3.18mm  $\pm$  0.18mm)  
0.250"  $\pm 0.014$ " (6.35mm  $\pm$  0.33mm)  
0.375"  $\pm 0.019$ " (9.53mm  $\pm$  0.48mm)  
0.500"  $\pm 0.025$ " (12.70mm  $\pm$  0.64mm)  
0.625"  $\pm 0.032$ " (15.88mm  $\pm$  0.81mm)  
0.750"  $\pm 0.038$ " (19.05mm  $\pm$  0.97mm)  
1.000"  $\pm 0.050$ " (25.4mm  $\pm$  1.27mm)

#### Weight

Compact sheet weighs approximately 90 lbs/ft<sup>3</sup>  
(1442 kg/m<sup>3</sup>).

#### Colors, Patterns, and Finish

Compact sheet is available in a broad selection of designs and colors in matte finish as factory orders.

Compact samples are available from Formica Corporation specification representatives or directly from Formica Corporation. Call 1-800-FORMICA™ for ZIP-CHIP™ service.

#### How To Specify

Panels shall be Compact® by Formica Group, Cincinnati, Ohio.

COLOR NUMBER \_\_\_\_\_

COLOR NAME \_\_\_\_\_

THICKNESS \_\_\_\_\_

FINISH \_\_\_\_\_

#### Use and Care

Compact sheet may be cleaned with a damp cloth and mild detergent. Use of abrasive cleaners, powders, scouring pads, steel wool, or sandpaper can damage the finish of the decorative surface. Acid or alkaline-based cleaners and/or compounds will mar, etch, corrode, and permanently discolor the melamine decorative surface of Compact sheets. Do not use these materials on Compact surfaces, nor allow bottles, rags contaminated with acid or alkaline-based cleaners/compounds to contact the surface. Accidental spills or splatters from these harsh materials should be wiped off immediately, and the area cleaned with a damp cloth.

#### Examples of these materials are:

drain cleaners	rust removers
coffeepot cleaners	metal cleaners
ceramic cooktop cleaners	tub and tile cleaners
chlorine bleach	oven cleaners
some countertop cleaners	bowl cleaners
some disinfectants	

If in doubt about the suitability of a particular cleaner or detergent, check with its manufacturer (Refer to Formica® Brand Laminate Use and Care Guide – Form no. YLT 02358W for specifics).

## **LIMITED WARRANTY**

Formica Corporation expressly warrants that, for a period of one (1) year from the date of first sale, these products will be reasonably free of defects in materials and workmanship, and that when properly handled and fabricated, will conform, within accepted tolerance, to applicable manufacturing specifications. Colors subject to dye lot variations. This limited warranty only applies to Formica® brand laminate which is stored, handled, fabricated and installed in the manner recommended by Formica Corporation. Due to the variety of uses and applications to which Formica brand laminate may be put, FORMICA CORPORATION CAN MAKE NO WARRANTY THAT THIS PRODUCT IS SUITABLE FOR ANY PARTICULAR PURPOSE AND CAN MAKE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OTHER THAN THOSE SET FORTH ABOVE.

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## **MANUFACTURER**

Formica Corporation  
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## **TECHNICAL SERVICES**

Technical assistance may be obtained through your local Formica® brand products distributor or from Formica Corporation trained representatives in sales offices throughout the country. To assist these representatives, Formica Corporation maintains a sales technical services staff in Cincinnati, Ohio. For technical assistance, contact your distributor or sales representative; write the company directly at Formica Corporation Technical Services Department, 10155 Reading Road, Cincinnati, OH, 45241; call (513) 786-3578 or 1-800-FORMICA™ (option 2); or fax (513) 786-3195. In Canada, call 1-800-363-9280. In Mexico, call (525) 530-3135.

